

TEACHERS RETIREMENT BOARD  
REGULAR MEETING

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SUBJECT: Cash Balance Plan Update

ITEM NUMBER: 10

ATTACHMENT(S): 5

ACTION:    

DATE OF MEETING: October 8, 1998

INFORMATION: X

PRESENTER: Ms. DuCray-Morrill

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A. Client Contact Update

The State Teachers' Retirement System (STRS) Cash Balance (CB) Plan marketing strategy continues to follow the Marketing Plan adopted by the Board in October, 1997.

Districts not included as target districts have requested employer visits/workshops and employee groups have requested informational CB Plan workshops. Employee informational workshops may be scheduled prior to the collective bargaining process and/or during the district election period. The workshops are an effective tool to inform both employers and employees regarding CB Plan provisions and to give employers information necessary for them to make decisions regarding CB Plan implementation.

From January 1998 through September 18, 1998 thirty-four employer/employee workshops have been presented to an estimated total of 583 individuals. This is in addition to thirty-two meetings scheduled with School District officials.

Marketing contacts also included workshop presentations to the Sacramento County Superintendents Association Conference. In December 1998 STRS staff will participate in the California School Boards' Association Conference. It is anticipated that six employee implementation workshops will be scheduled and given in November 1998.

B. Update on Administration

The Teachers' Retirement Board (TRB) has repeatedly reaffirmed its support and commitment to continue the marketing and administrative efforts to ensure the long-term existence of the STRS CB Plan. The projections in this update assume that growth will continue on its current path, and that no major changes to the plan design of CB Plan will take place in the next few years. As of July 1, 1998, the Plan's fund had grown significantly, exceeding \$1.5 million in assets.

**BACKGROUND****June 1997 Milliman and Robertson Projections**

During the start-up phase, the CB Fund was expected to have a negative balance for at least five to seven years. During the June 5, 1997 regular Board meeting, staff presented several projections prepared by STRS' former consulting actuary, Milliman and Robertson, projecting the length of time it should take for the Plan to reach a "break even" point. The "break even" point has been defined as the first time the Plan reaches a positive gain/loss reserve balance, including administrative costs and outstanding debts. The gain/loss reserve is the difference between the net assets of the fund and the amount owed to participants, including total contributions and interest. When these projections were calculated, the CB Plan had two participating employers, Contra Costa Community College District and Robla Elementary School District; 288 participants; \$86,716 in total contributions; and a \$579 gain/loss reserve balance.

The projections made by Milliman and Robertson were based upon data provided by the former CB Plan Director. The assumptions used in determining the viability of the Plan are listed below:

Estimated Eligible Part-Time Population:	=	96,000	
Percentage of Total Eligible Enrolled:	1997 =	288	(.3%)
	1998 =	10,560	(11%)
	1999 =	19,200	(20%)
	2000 =	28,800	(30%)
Average Salary:	97-98 =	\$6,700	
	98-99 =	\$7,069	
	99-00 =	\$7,457	
	00-01 =	\$7,867	
Wage Inflation	=	5.5% per year	
Contribution Rate:	=	8% of average salary	
Minimum Interest Rate:	96-97 =	6.75%	
	97-98 =	7.00%	
Constant Thereafter	=	7.00%	
Investment Rate of Return	=	8.00%	
On-going Administrative Expenses	=	\$500,000 per year	

Milliman and Robertson used the projected earnings spread to estimate when the break-even point would be reached. The earnings spread is the difference between the investment return rate and the guaranteed interest rate applied to participant accounts. According to the projections, if the plan earned a 1% spread (8% earned interest minus 7% guaranteed interest rate applied to the

participant accounts) it would take approximately 15 years to break-even; a 2% spread would take 8 years, and a 3% spread would take 6 years.

<b>EARNINGS SPREAD</b>	<b>Break Even Year</b>
1%	15 <sup>th</sup>
2%	8 <sup>th</sup>
3%	6 <sup>th</sup>

Watson Wyatt, STRS' new consulting actuary reviewed the June 1997 projections and concurred with the methodology and results of Milliman and Robertson's analyses based upon the information provided at the time.

#### **1996/97 Actuarial Valuation**

In November 1997, Watson Wyatt made recommendations to the TRB regarding actuarial assumptions and methods to be utilized in performing the Plan's first actuarial valuation. (Attachment 1) Watson Wyatt commented that the Plan has not been operational for a long enough period to allow for a useful actuarial investigation of the Plan's demographic and economic experience.

According to the June 30, 1997 actuarial valuation, the current funded status of the Plan is reasonable and on target given the current participation levels and asset balances. The valuation stated that the financial condition of the Plan would improve as additional employers offer the Plan and the number of participants increases.

#### **February 1998 Projections**

During the February 5, 1998 regular Board meeting, staff reported that the CB Plan had 1,592 contributing participants working for eight employers. The Plan also had five employers with signed resolutions going through the election process, and two additional employers that were taking resolutions to their boards in the spring of 1998. One of the employers expected in the spring, San Mateo Community College District, decided to wait until the end of the legislative session before considering offering the CB Plan. However, another smaller district, Berkeley Unified School District replaced San Mateo Community College so the CB Plan still realized the same gain in the number of participating employers.

Early in the CB Plan history, emphasis was placed on "potential" or "enrolled" participant base, not actual contributing participants. Since the number of "potential" participants has little direct bearing on the amount of contributions the plan actually receives, basing the program on "potential" participants is not the most reasonable means of displaying the status of the plan. The February 5, 1998 TRB update reported the number of actual contributing participants and total contributions received and used this data to project the CB Plan growth.

The long-range financial projections that were developed for the February TRB agenda item are conservative in that they only use CB participants expected for the rest of the 1997/98 fiscal year.

There were no long-range participant growth projections included in the February report. The financial projections for the rest of the 1997/98 fiscal year, however, are more accurate than the long-range financial projections, because long-range participant growth is not taken into account. The February projections for the end of the fiscal year included total contributions and interest of \$1,547,601, total net assets of \$1,575,113; gain/loss reserve balance of \$27,512; each of these projections have been met or exceeded.

## **DISCUSSION**

### **Statistical Update**

The CB Plan has experienced rapid growth over the past year. There were only two employers in two counties offering the Plan as of July 1, 1997. As of June 30, 1998 there were thirteen employers in nine counties that employ 3,507 participants. The following chart shows the participating employers and months in which they began or will begin contributing to the CB Plan.

### **CB PARTICIPATING EMPLOYERS**

<b>EMPLOYER NAME</b>	<b>BEGINNING REPORTING DATE</b>			
	<b>JUNE 1997</b>	<b>DECEMBER 1997</b>	<b>JUNE 1998</b>	<b>OCTOBER 1998</b>
Contra Costa CCD	X			
Robla Elementary SD	X			
Peralta CCD		X		
West Contra Costa Unified SD		X		
Grossmont Union High SD		X		
Fremont-Newark CCD		X		
City College of San Francisco		X		
El Camino CCD		X		
Solano CCD			X	
Chabot-Las Positas CCD			X	
Sonoma County Jr. CD			X	
San Jose – Evergreen CCD			X	
Berkeley Unified SD			X	
Yuba CCD				X
Glendale CCD				X

As of the 1997-98 fiscal year end, the number of participants had increased 3,012 people from one year earlier, a 608% increase from the July 1, 1997 participant level of 495. There were 3,662 sub-accounts for the Plan, which means that two or more CB employers employ 155 of the participants.

The total contributions and assets of the CB Plan have also increased significantly since July 1, 1997. The Plan had a cumulative total of \$1,575,737 contributions and guaranteed interest and a total asset value of \$1,619,619 as of July 1, 1998. With 60% of the CB Fund allocated to the S&P 500 index and 40% to fixed income, the Fund has yielded a 23.2% return over the past fiscal year, a 16.2% earnings spread.

### Annual Increases of CB Vital Statistics

	July 1997	January 1998	July 1998	Annual Increase	% Annual Increase
<b>Participants</b>	495	1550	3507	3012	608%
<b>Total Contributions + Guaranteed Interest</b>	\$150,935	\$489,647	\$1,575,737	\$1,424,802	944%
<b>Net Asset Value</b>	\$166,757	\$503,763	\$1,619,619	\$1,452,862	871%
<b>*Gain/Loss Reserve Balance</b>	\$15,822	\$14,116	\$43,882	\$28,060	177%

\*The gain/loss balances have not been adjusted to reflect the cost of administrative expenses or repayment of the loan.

Attachment 2 shows the growth of the Fund in total contributions, Plan assets, and gain/loss reserve balance. The chart shows these figures from July 1, 1997 through July 1, 1998. The significant growth of the fund over this period is evident in the chart.

The growth of CB Plan contributions, assets, and gain/loss reserve has exceeded the February 1998 projections. This is due mainly to the increased participant growth over the past six months and the high investment rate of return. There were over \$28,000 more in contributions and interest than the February CB Plan update projected; the assets of the CB Fund grew \$44,000 more than expected; and the gain/loss reserve balance increased \$16,370 more than was projected. Exceeding these expectations demonstrates the promising future of the CB Plan.

### Statistical Comparison to February Projections

	February Projections	Actual July 1998 Data	Increase over Projection
<b>Total Contributions + Guaranteed Interest</b>	\$1,547,601	\$1,575,737	\$28,136
<b>Net Asset Value</b>	\$1,575,113	\$1,619,619	\$44,506
<b>* Gain Loss Reserve Balance</b>	\$27,512	\$43,882	\$16,370

\*The gain/loss balances have not been adjusted to reflect the cost of administrative expenses or repayment of the loan.

**1998/99 Projections**

The CB Plan will continue to grow during the next fiscal year. Based on CB Plan data (as of July 1, 1998), staff have made new projections using the following assumptions:

Estimated Eligible Part-Time Population:	83,796
Increase in Participation:	2,000 per year
Average Salary:	98-99 = \$ 8,651
Wage Inflation of 5.5% per year	99-00 = \$ 9,127
	00-01 = \$ 9,629
	01-02 = \$10,158
	02-03 = \$10,717
Contribution Rate:	8% of average salary
Minimum Interest Rate:	98-99 = 6.50%
Constant Thereafter	6.50%
Investment Rate of Return	10.00%

By the end of the 1998/99 fiscal year, the CB portfolio is projected to surpass \$5 million in assets and \$4.6 million in total contributions. These numbers demonstrate that the CB Plan is quickly growing into a self-sufficient and viable retirement plan.

The growth in participants over the next year is expected to begin with the two districts who will commence contributing to the Plan by October. Attachment 3 shows monthly projections through the end of the calendar year for the three fiscal categories that are discussed. This chart shows the continued growth of the CB Plan into 1999. The long range forecast is encouraging.

As of September 25, 1998, there are no new districts with signed resolutions going through the election process. It should be noted that many employers have stated that they are waiting to see the outcome of the current legislation (SB 2085) and how it will effect the CB Plan administration before considering offering the plan to employees. Using a 2,000 participants per year growth rate and a 10% investment rate of return, the CB Plan should meet the following projections:

**Projected CB Vital Statistics**

	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Participants</b>	3507	5500	7500	9500	11500	13500
<b>Total Contributions + Guaranteed Interest</b>	\$1,575,737	\$4,913,324	\$10,309,745	\$17,977,504	\$28,260,141	\$41,539,269
<b>Net Asset Value</b>	\$1,619,619	\$5,095,467	\$10,754,770	\$18,886,829	\$29,933,092	\$44,394,743
<b>* Gain/Loss Reserve Balance</b>	\$43,882	\$182,143	\$445,025	\$909,325	\$1,672,951	\$2,855,474

\*The gain/loss balances have not been adjusted to reflect the cost of administrative expenses or repayment of the loan.

These projections are presented as a chart in attachment 4. This chart clearly shows that the Plan is growing at an exceptional rate and viable. Attachment 5 shows the complete statistical history and projections of the Plan from March 1997, when the first contributions were received, through July 2003 and can be referenced for past and future trends.

The February TRB item specified that 1997-98 administrative expenses for the CB Plan were more accurately estimated at \$250,000, not \$500,000 as previously expected. Of course, with the increase in participation, size and relational workload of the Plan, administrative costs should increase accordingly.

SB 2085, authored by Senator Burton, would merge the CB Fund into the TRF, which already exists for administration of all other programs and ancillary benefits administered by STRS. If enacted as expected, SB 2085 would provide the administrative efficiency to maintain the Plan. Administrative expenses associated with the CB program would have only a marginal impact on STRS' total administrative expenses and the CB program would become more viable during this early start-up stage. This would improve the short-term viability and the long-range success of the Plan. Contributions from all DB Plan members and CB Plan participants would be invested in the TRF; however, STRS would continue to separately identify the individual accounts and pay the respective benefits based on the appropriate formulas. In other words, this administrative action would not impact the current DB and CB Plan benefit structures.

**RECORDKEEPING**

The current reporting structure of the CB Plan data resides on three separate platforms, IDMS, FoxPro and CB Plan ADABAS. The CB Plan ADABAS environment function is to receive and post CB Plan participant's contributions; the IDMS environment function is to allow the STRS Public Service Office to query participants data, and the FoxPro environment function is to calculate interest and print annual statements. The result of the current reporting structure creates an administrative problem, and is deficient in many of the basic functional requirements necessary to maintain participant data.

STRS' Chief Executive Officer reported to the Board at the October 1997 meeting his approval to pursue a sole source contract with an information technology firm to develop an electronic information processing system to host the STRS CB Plan database and maintain its associated software. The Cash Balance Information Technology System (CBITS) Project Team was formed on October 17, 1997 to analyze and research various alternatives for maintaining the CB Plan database, both internally and externally and recommend the appropriate course of action. The team's goal is to design a new electronic information processing system infrastructure that will correct the fundamental deficiencies of the current systems, and to consolidate all three platforms to a centralized platform to simplify management and administration of the CB Plan. However, all efforts were suspended the following month with the Board's desire to reassess the viability of the CB Plan. Contract efforts were not resumed until approval was granted for continuing the CB Plan at the February 5, 1998 meeting.

CBITS has researched the procurement of an electronic information processing system to internally host CB Plan data and its associated software on a single database. The team analyzed both current and future CB Plan hardware and software reporting requirements and researched viable database solutions. The team also researched current and innovative technology to carry the new hybrid plan into the 21st century. At the time the DB Plan's feasibility study report (FSR) for START was developed, today's technology was not available. The CB Plan FSR incorporated current technology into its proposed new database system. Once the START project is completed around March 2000, staff will evaluate available technology and consolidate the two databases as appropriate.

The team has worked extensively with an information technology firm to specify program and plan requirements to insure the proposed software and its customization will provide the administration and recordkeeping system necessary to support the CB Plan. However, after obtaining a final written proposal from the vendor, STRS' Executive Staff concluded that it is necessary to pursue a contract through the competitive bid process since the final bid received far exceeds the initial cost estimate. The additional time required to complete a formal competitive bid process would extend the development of a new database by ten months. This would still produce a finished product in enough time to adequately service the school districts that are reporting and submitting contributions by the end of July 1999. Team members have begun working with the Contracts Unit to process a Request For Proposal (RFP) for a client-server database system for the CB Plan. Staff believes more information technology firms may now be available and willing to compete in a competitive bid process at a reasonable cost. However, all work on the redesign of the CB database has been suspended until the fate of SB 2085 is known.

### **Benefit Requests**

The CB Plan has received requests for termination, retirement and death benefits from CB participants and beneficiaries. As of September 17, 1998, staff have received ten requests for termination benefits, three for retirement benefits, and one for a death benefit. Participants requesting termination benefits are required to wait one year after termination of all creditable



services before a distribution of the balance of the employer and employee accounts can be made. There are no waiting periods for retirement or death benefits.

The normal form of distribution of retirement and death benefits is a lump sum payment. However, participants and surviving spouses, provided they are the only named beneficiary, may elect to receive benefits in the form of an annuity, provided the sum of the employee and employer accounts are equal or exceeds \$3,500. A death benefit becomes payable to the beneficiary upon receipt of proof of the participant's death. If a participant dies prior to retirement or commencement of an annuity, the death benefit payable is the amount equal to the sum of the participant's employee and employer accounts. None of the participants applying for retirement or beneficiaries applying for death benefits are eligible to receive an annuity. All termination, retirement, and death benefits will be paid to participants or their beneficiaries in a timely manner.

**NOTES TO REQUIRED SUPPLEMENTARY INFORMATION**  
**(As Required by GASB No. 25)**

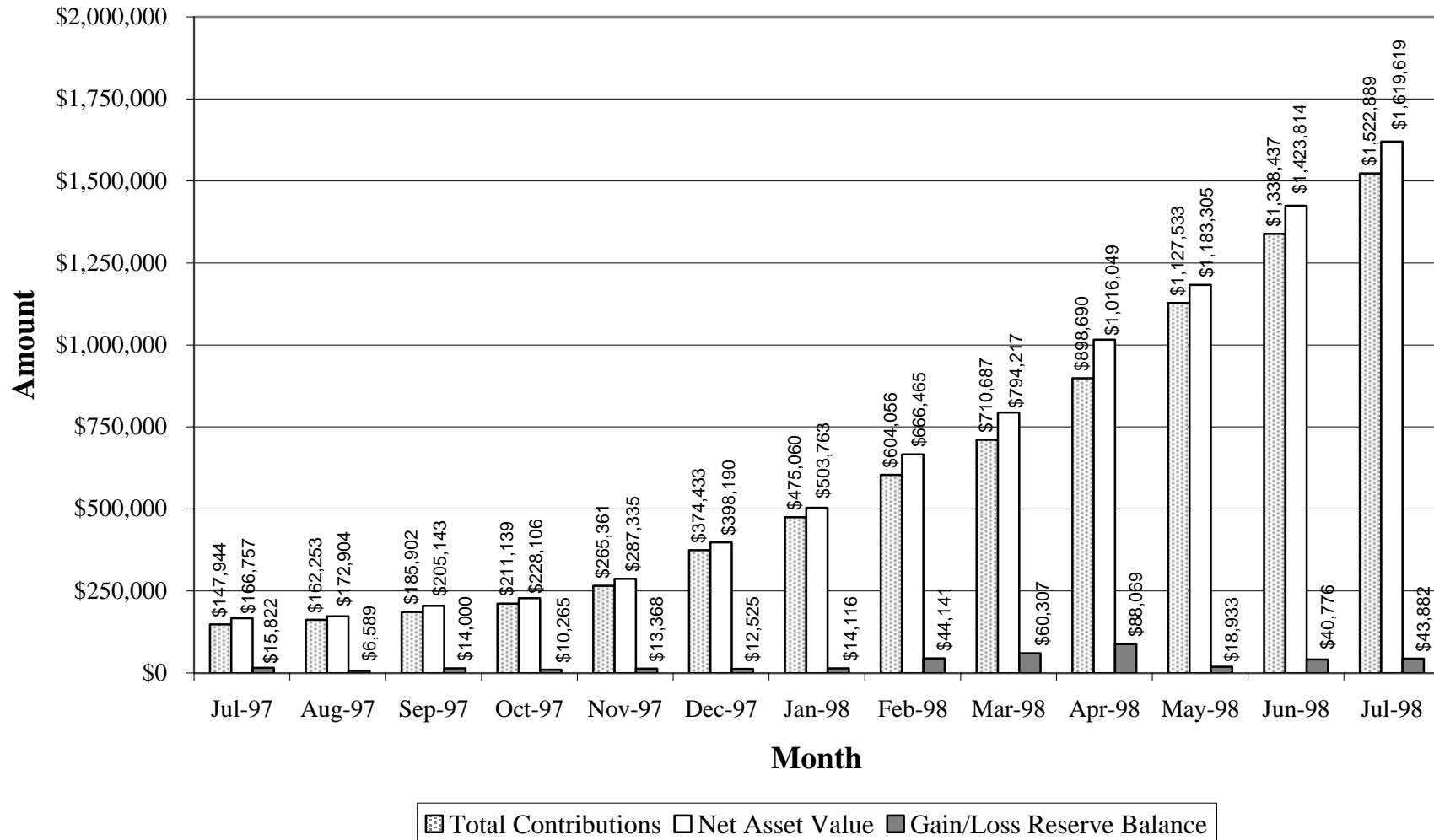
Valuation date	June 30, 1997
Actuarial cost method	Traditional Unit Credit
Asset valuation method	Market Value of Net Assets
Actuarial assumptions:	
Investment rate of return	7.0%
Wage inflation	5.5%
Interest on Participant accounts	7.0%
Consumer Price Inflation	4.5%

**STATISTICAL INFORMATION**

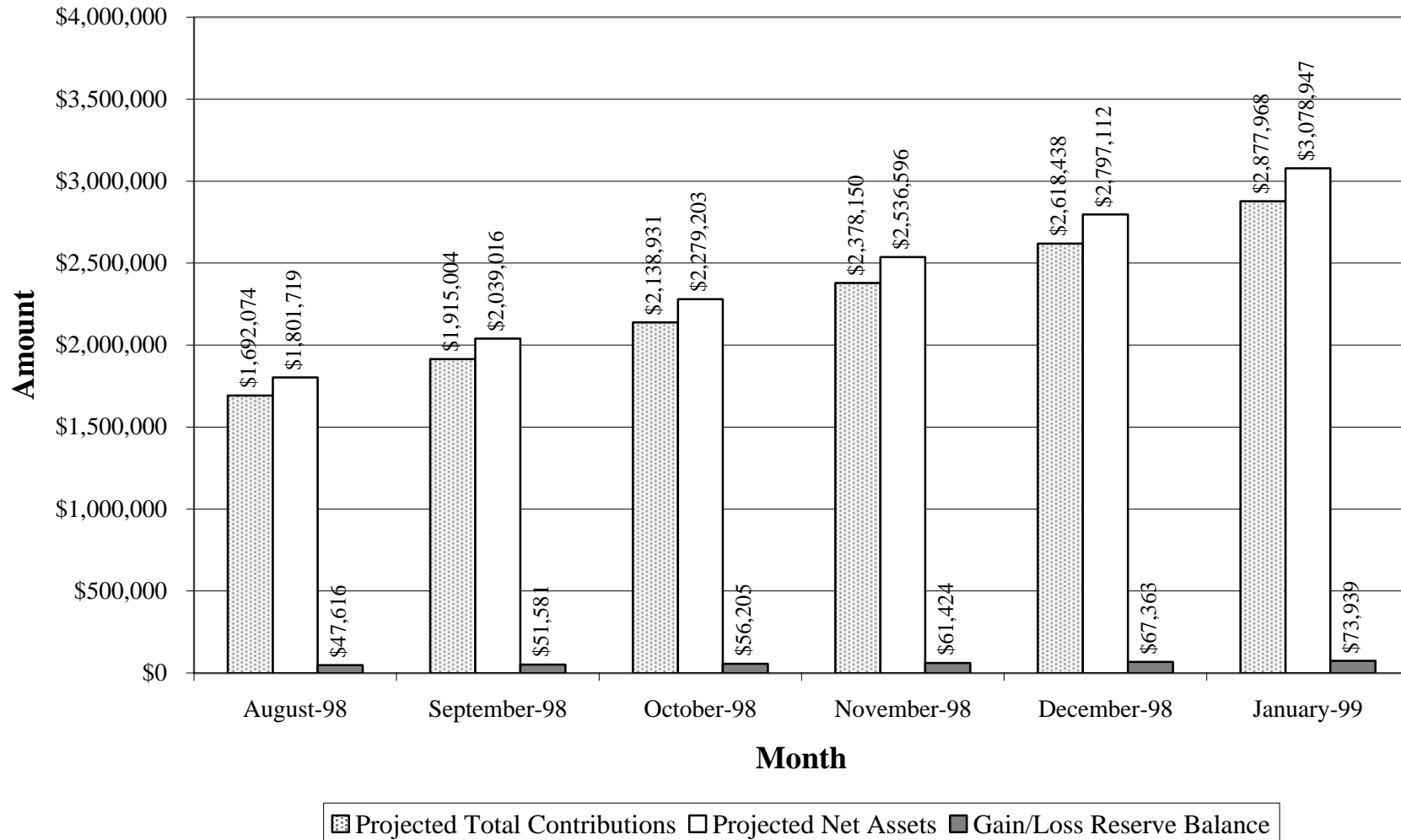
	As of <u>June 30, 1997</u>
A. Number	
1. Active Participants	
a. Total Active Participants	1,057*
b. Average age	46.7 years
c. Average service	0.5 years
2. Inactive Participants	0
B. Annualized Salaries	
1. Active Participants	
a. Total salary	\$4,504 million
b. Average annual salary	\$4,261
C. Accumulated Account Balances	
1. From Participant Contributions	\$80,924
2. From Employer Contributions	\$80,924
3. Total	\$164,078
D. Persons Receiving Benefits	
1. Number	0
2. Annual Pensions Payable	\$0

\*Of these, 495 have account balances and the rest are new to the plan.

## Financial Data of Cash Balance Plan 1997-98 Fiscal Year

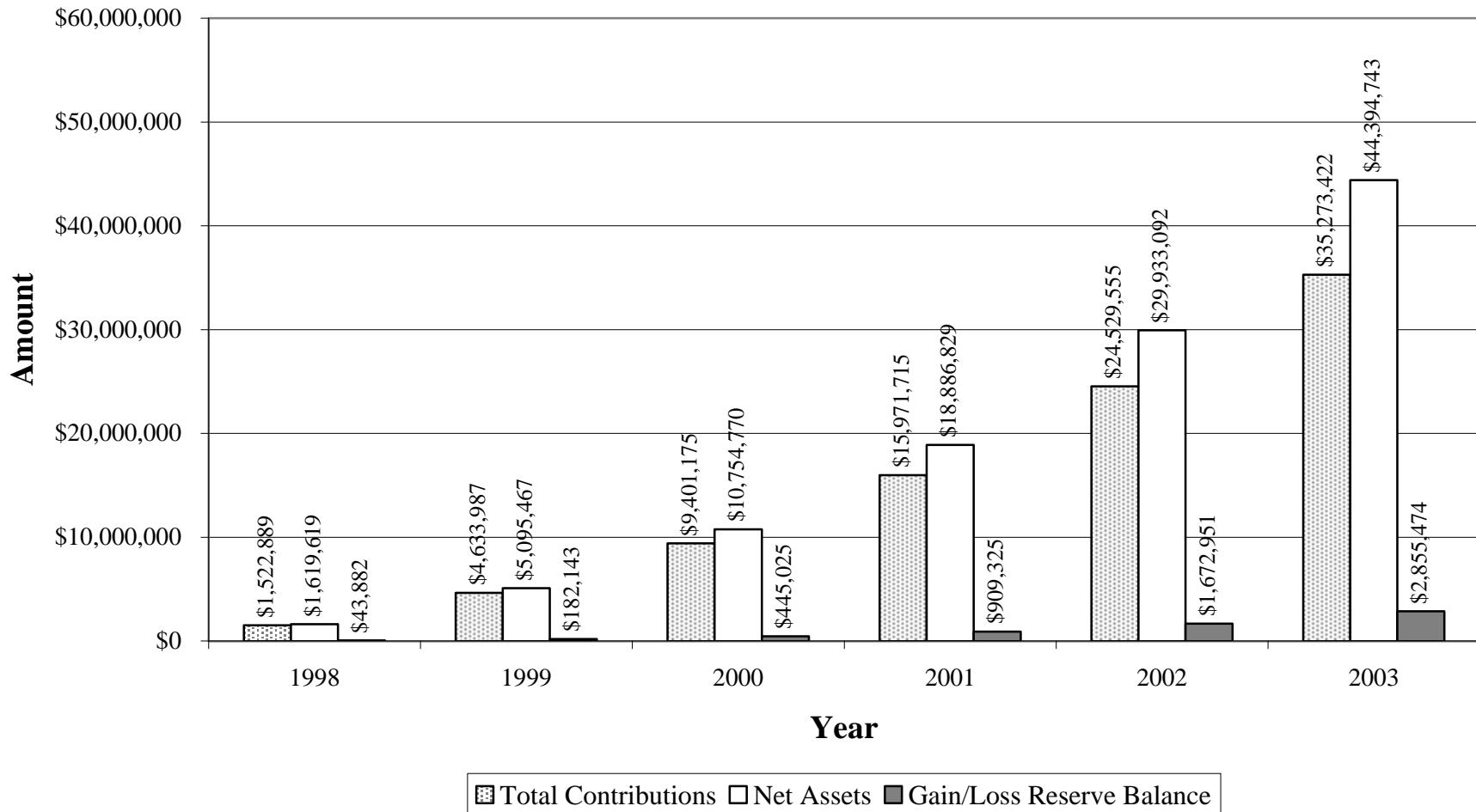


## Financial Data of Cash Balance Plan 1998-99 Fiscal Year - 1st Half



## Cash Balance Plan Future Years Projections

based on 2,000 new members per year  
and 10% investment rate of return



**Cash Balance Plan Statistics and Projections**  
(based on 2,000 new members per year)

	Estimated Participants	Previous Month's Contributions	Total Contributions Invested	Net Asset Value of CB Portfolios (Market Value today)		\$ Increase in Portfolio	Interest Guarantee from Detail Page	Cumulative Gain/(Loss)
March-1997		\$25,061	\$25,061	\$24,220		(\$841)	\$292	(\$1,133)
April-1997		\$29,003	\$54,063	\$55,337		\$1,274	\$695	\$579
May-1997		\$32,653	\$86,716	\$91,073		\$4,357	\$1,293	\$3,064
June-1997		\$31,398	\$118,114	\$126,600		\$8,486	\$2,063	\$6,422
July-1997	495	\$29,830	\$147,944	\$166,757		\$18,813	\$2,991	\$15,822
August-1997	600	\$14,308	\$162,253	\$172,904		\$10,652	\$4,062	\$6,589
September-1997	750	\$23,650	\$185,902	\$205,143		\$19,241	\$5,241	\$14,000
October-1997	950	\$25,237	\$211,139	\$228,106		\$16,967	\$6,702	\$10,265
November-1997	1150	\$54,223	\$265,361	\$287,335		\$21,974	\$8,605	\$13,368
December-1997	1350	\$109,072	\$374,433	\$398,190		\$23,757	\$11,232	\$12,525
January-1998	1550	\$100,627	\$475,060	\$503,763		\$28,703	\$14,587	\$14,116
February-1998	1600	\$128,996	\$604,056	\$666,465		\$62,409	\$18,268	\$44,141
March-1998	1900	\$106,631	\$710,687	\$794,217		\$83,530	\$23,223	\$60,307
April-1998	2300	\$188,003	\$898,690	\$1,016,049		\$117,359	\$29,290	\$88,069
May-1998	3006	\$228,843	\$1,127,533	\$1,183,305		\$55,772	\$36,839	\$18,933
June-1998	3350	\$210,904	\$1,338,437	\$1,423,814		\$85,377	\$44,600	\$40,776
July-1998	3419	\$184,452	\$1,522,889	\$1,619,619		\$96,730	\$52,848	\$43,882
<b>August-1998</b>	<b>3507</b>	<b>\$169,185</b>	<b>\$1,692,074</b>	<b>\$1,801,719</b>		<b>\$109,645</b>	<b>\$62,029</b>	<b>\$47,616</b>
<b>September-1998</b>	<b>3935</b>	<b>\$222,930</b>	<b>\$1,915,004</b>	<b>\$2,039,016</b>		<b>\$124,013</b>	<b>\$72,432</b>	<b>\$51,581</b>
<b>October-1998</b>	<b>3935</b>	<b>\$223,927</b>	<b>\$2,138,931</b>	<b>\$2,279,203</b>		<b>\$140,272</b>	<b>\$84,067</b>	<b>\$56,205</b>
<b>November-1998</b>	<b>4185</b>	<b>\$239,219</b>	<b>\$2,378,150</b>	<b>\$2,536,596</b>		<b>\$158,447</b>	<b>\$97,023</b>	<b>\$61,424</b>
<b>December-1998</b>	<b>4185</b>	<b>\$240,288</b>	<b>\$2,618,438</b>	<b>\$2,797,112</b>		<b>\$178,674</b>	<b>\$111,311</b>	<b>\$67,363</b>
<b>January-1999</b>	<b>4500</b>	<b>\$259,530</b>	<b>\$2,877,968</b>	<b>\$3,078,947</b>		<b>\$200,978</b>	<b>\$127,039</b>	<b>\$73,939</b>
<b>July-1999</b>	<b>5500</b>	<b>\$325,810</b>	<b>\$4,633,987</b>	<b>\$5,095,467</b>		<b>\$461,480</b>	<b>\$279,337</b>	<b>\$182,143</b>
<b>July-2000</b>	<b>7500</b>	<b>\$468,722</b>	<b>\$9,401,175</b>	<b>\$10,754,770</b>		<b>\$1,353,595</b>	<b>\$908,570</b>	<b>\$445,025</b>
<b>July-2001</b>	<b>9500</b>	<b>\$626,368</b>	<b>\$15,971,715</b>	<b>\$18,886,829</b>		<b>\$2,915,114</b>	<b>\$2,005,789</b>	<b>\$909,325</b>
<b>July-2002</b>	<b>11500</b>	<b>\$799,938</b>	<b>\$24,529,555</b>	<b>\$29,933,092</b>		<b>\$5,403,537</b>	<b>\$3,730,586</b>	<b>\$1,672,951</b>
<b>July-2003</b>	<b>13500</b>	<b>\$990,706</b>	<b>\$35,273,422</b>	<b>\$44,394,743</b>		<b>\$9,121,321</b>	<b>\$6,265,847</b>	<b>\$2,855,474</b>

Note: Bold = projected data based on contributions of 1997-1998, equal to \$8200 annual salary per person. Future contributions are based on \$8200 per person plus 5.5% wage inflation.

ASSUMPTIONS	
Investment Rate of Return	10.0%
Cash Balance Minimum	
Interest Rate	6.5%
Wage Inflation	5.5%